

MIPP Software/Analysis meeting

Ckov LLs for tracks with RICH pid

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Fermilab

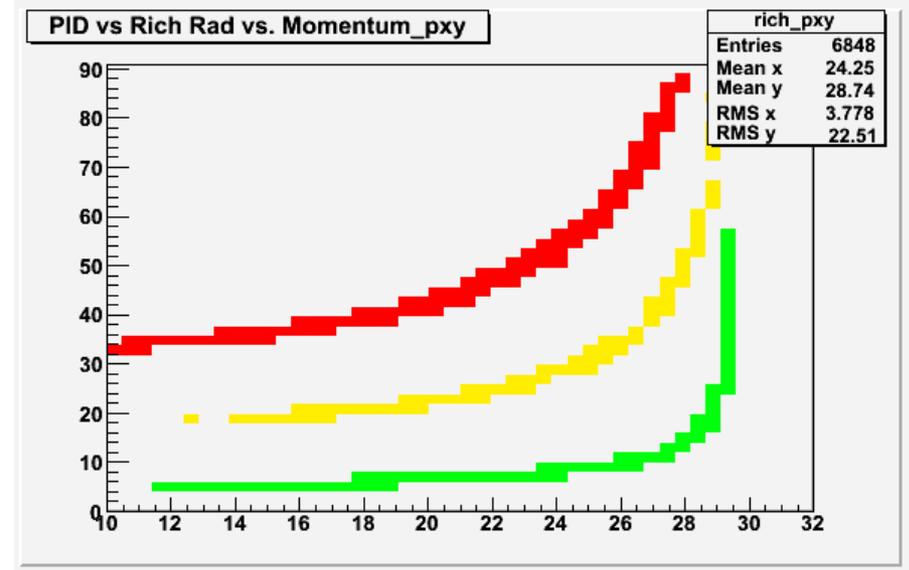
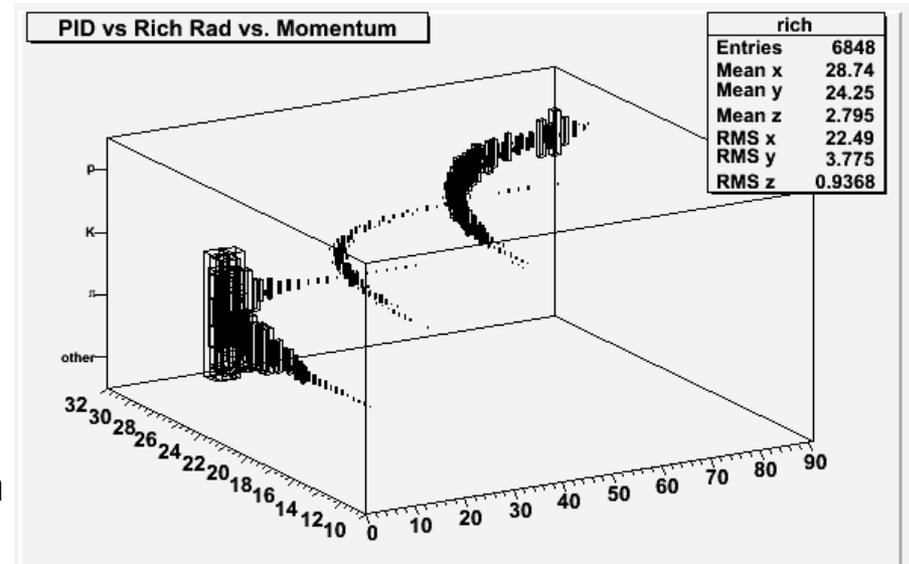
6/20/08

Outline

- Ckov LogLikelihood differences for tracks with RICH pid
- Miscellaneous notes

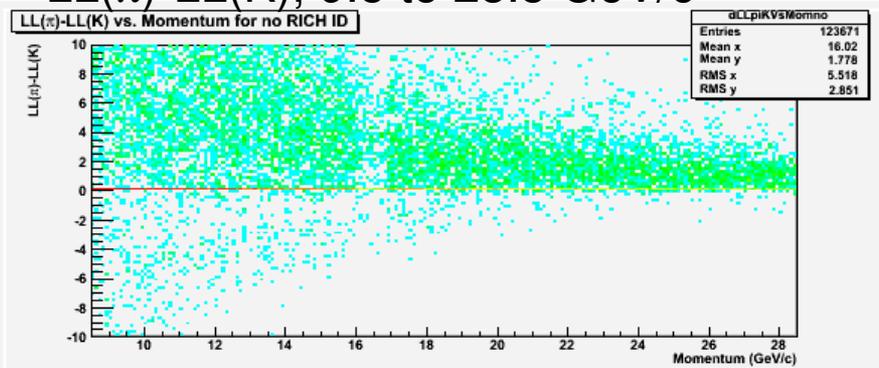
Ckov LLs

- After a bug fix in March Ckov LL differences looked good.
 - Both Jon and I showed plots.
- Now I plot Ckov LL differences for tracks that are cleanly identified in the RICH.
 - Use DSTs with latest development release on run 10013501
 - ID tracks in RICH using new function `DSTUtils::RICH::SimpleRadPID(evt,trk)`
 - gives high purity, is very inefficient
 - see plots on this page
 - `Project3DProfile()` swaps axes?

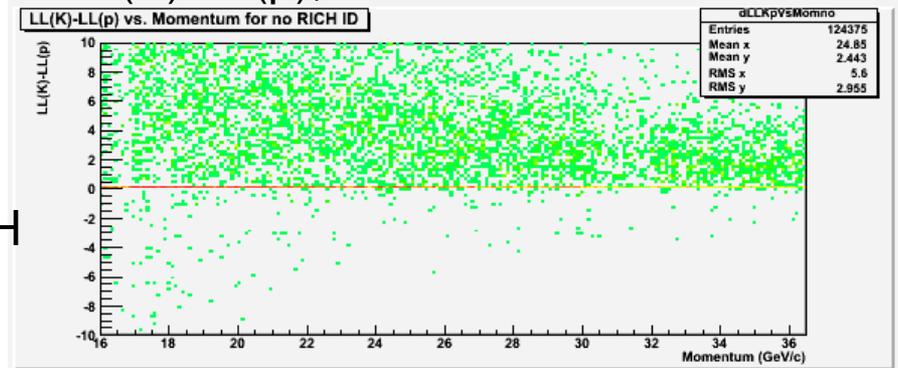


Ckov LL differences

LL(π)-LL(K), 9.5 to 28.5 GeV/c

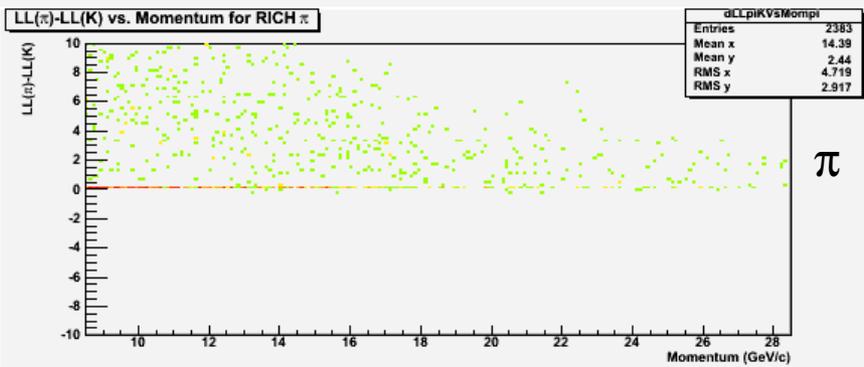


LL(K)-LL(p), 16 to 36.5 GeV/c



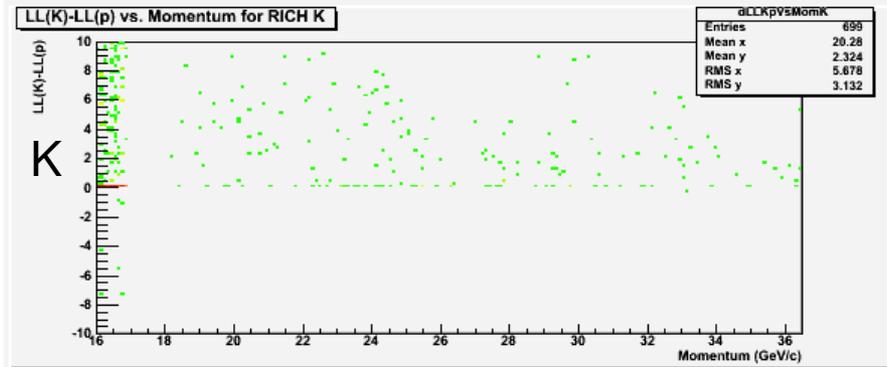
no
RICH
ID

LL(π)-LL(K) vs. Momentum for RICH π



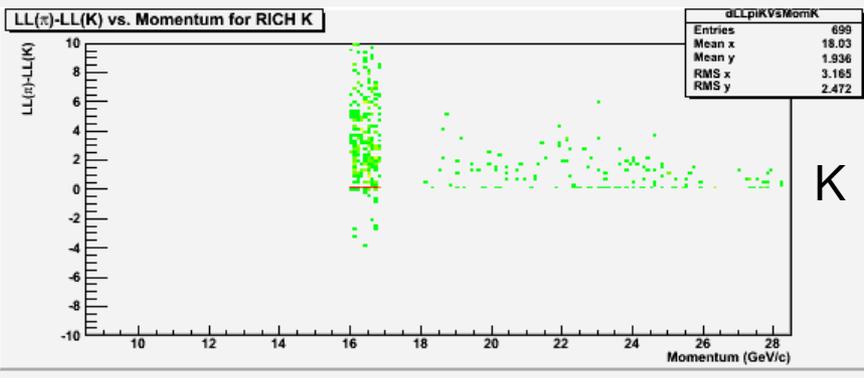
π

LL(K)-LL(p) vs. Momentum for RICH K



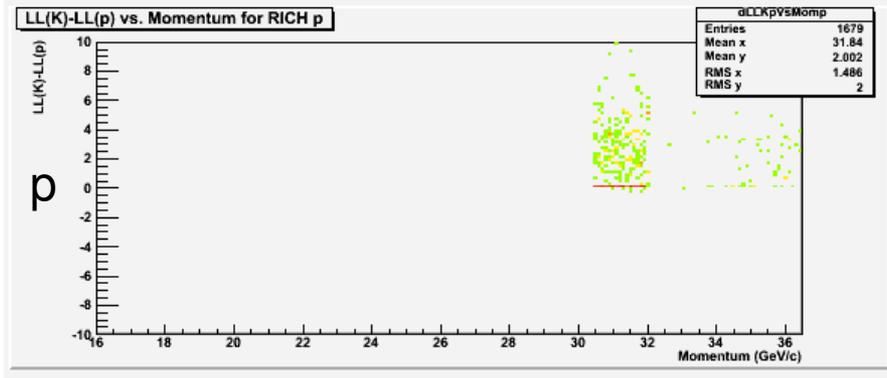
K

LL(π)-LL(K) vs. Momentum for RICH K



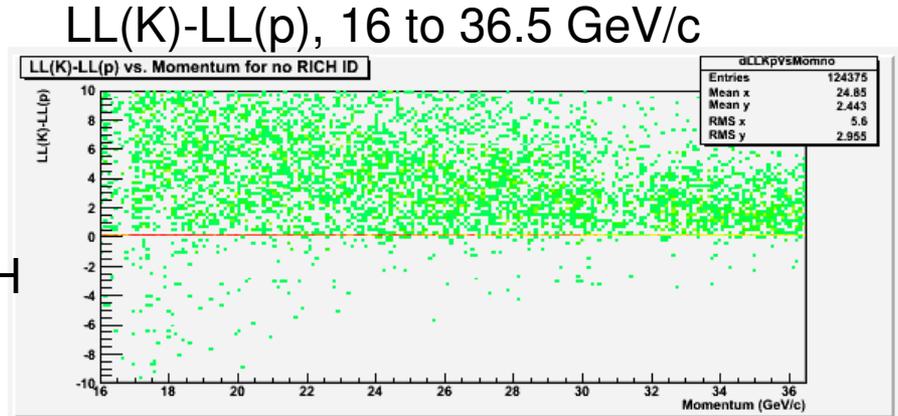
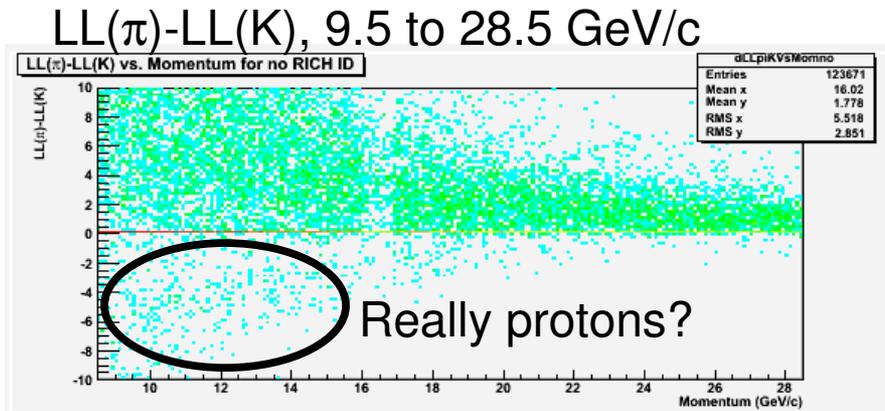
K

LL(K)-LL(p) vs. Momentum for RICH p

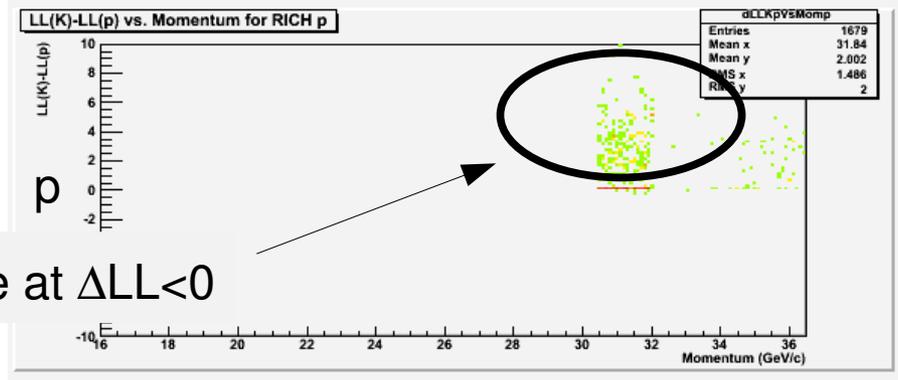
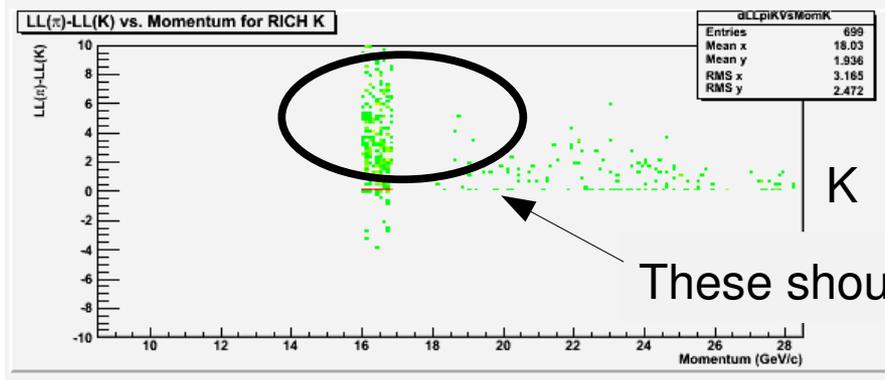
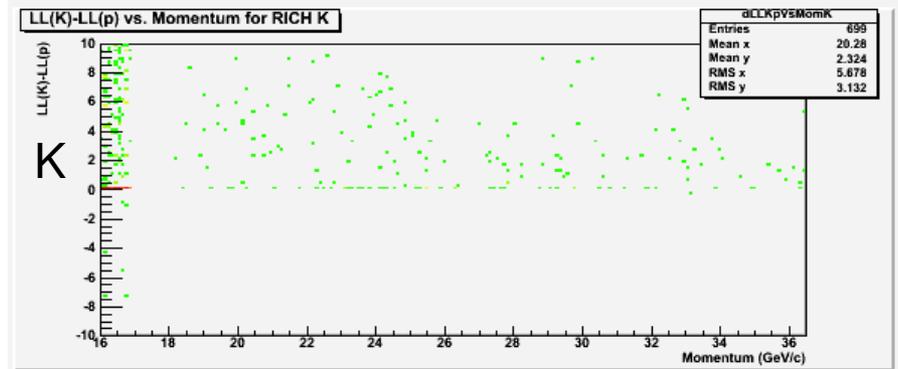
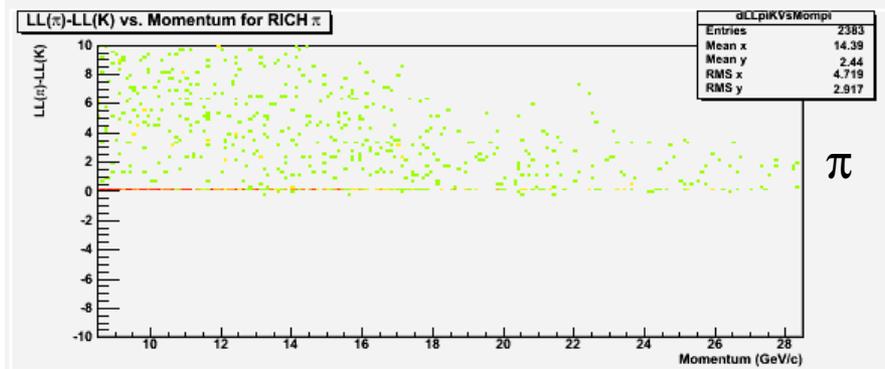


p

Ckov LL differences



no
RICH
ID



These should be at $\Delta LL < 0$

Ckov LL Summary

- Something is still not right.
- Ckov digitization – once it is tuned up – will help to improve Ckov LLs
 - I am working on it.

Miscellaneous notes

- TPC dE/dx prediction for Electrons was scaled up by 9% to better fit the data.
 - I scaled the coefficients in the DB based on Jon's determination of factor 1.09
- Several modifications to GridUserJob and GridSubmitUserJob allow for easy use of FNGP-OSG.
 - Already used by Raja, Durga, others
 - Ask me how
- I fixed some issues with initialization (DB, RunInfo, ...) for MC runs
 - T0Reco does not crash for runs > 100000000 any more
 - TPCBetheBloch coefficients get loaded correctly for MC runs
 - the coefficients do not depend on run
 - more MC initialization problems remain